# Final Initial Study/Mitigated Negative Declaration for the Eticuera Creek Watershed Invasive Plant Control and Habitat Restoration Project Napa County, California

**Lead Agency:**
**State of California**
**The Resources Agency**
**Department of Fish and Game**
**Bay Delta Region**
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**January 2009**

# INITIAL STUDY

## I. Background

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| **PROJECT TITLE:** | **Eticuera Creek Watershed Invasive Plant Control and Habitat Restoration** |
| **LEAD AGENCY:** | **California Department of Fish and Game**<br>**Bay Delta Region**<br>**P.O. Box 47**<br>**Yountville, CA 94559**<br><br>**Contact: Stacy Martinelli**<br>**(707) 944-5537** |
| **PROJECT LOCATION:** | **Eticuera Creek Watershed, Napa County: Knoxville USGS 7.5'quad map: Township 11N, Range 4W (Sections 4, 5, 6, 7, 9, 15, 16, 26; portions of Sections 3, 8, 10, 11, 14, 17, 21, 22, 23, 24, 25, 27, 35, 36); portion of Township 12N, Range 4W; Walter Springs USGS 7.5'quad map: Township 10N, Range 4W (Sections 6, 7); Township 10N, Range 5W (Sections 1, 12).**<br>**Also, APN: 15-180-14, 15-180-05, 15-190-04, 15-190-01 15-220-090** |
| **ZONING:** | **Agricultural Watershed Open Space** |
| **APPLICANT:** | **Land Trust of Napa County (for the Blue Ridge Berryessa Natural Area Conservation Partnership)**<br>**700 Soscol Ave., Suite 20**<br>**Napa, CA 94559** |

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## 1. Introduction and Summary

### *1.1 Environmental Review Process*

The project proposes to enhance and restore riparian and upland habitat functions and values by the removal and control of invasive plants along the banks and associated floodplains of perennial and seasonal-flowing streams of the Eticuera Creek watershed, Napa County, California. Plant control techniques may include the use of mowing, cutting, herbicides, and grazing. In the northern portion of the watershed, invasive plant control will be followed by the planting of native vegetation along creek banks and associated uplands.

California Department of Fish and Game (CDFG) is the lead agency. This Initial Study (IS) and a Mitigated Negative Declaration (MND) were prepared for the proposed project pursuant to the California Environmental Quality Act (CEQA), as amended (Public Resources Code Section 21000 et seq.) and in accordance with CEQA Guidelines (California Code of Regulations Section 12500 et seq 453e).

The MND will be considered for adoption after the public review period concludes and public comments are evaluated, and the CDFG finds there is no substantive evidence that the proposed project will have a significant adverse effect on the environment. The project is anticipated to result in beneficial effects to aquatic-associated, riparian and upland and their habitat in the Eticuera Creek watershed.

The purpose of this IS is to determine whether implementation of the proposed project would result in potentially significant effects to the environment and, if so, to incorporate mitigation measures to reduce or eliminate the proposed project's significant or potentially significant adverse effects to a less-than-significant level.

### *1.2 Summary of Findings*

Based on the environmental checklist prepared for the proposed project, the supporting environmental analysis and proposed mitigation measures, the proposed project would have no adverse impacts or less than significant adverse impacts for the following issues: cultural resources, biological resources, land use and agricultural resources, population and housing, recreation, geology and soils, hydrology and water quality, noise, air quality, transportation and circulation, energy and mineral resources, public services, utility and service systems, aesthetic and hazards.

As provided in CEQA, Section 21064.5, a MND could be prepared for a project subject to CEQA if the proposed project will not have a significant adverse effect on the environment. There is no substantial evidence that the proposed project, with proposed mitigation measures incorporated, would have a significant adverse effect on the environment as indicated by the information and analysis presented in this IS. Therefore, CDFG will prepare and adopt a MND pursuant to CEQA Guidelines.

## 2. Project Location, Description and Purpose and Need

### *2.1 Project Location*

The Eticuera Creek watershed comprises 34,000 acres at the north end of Lake Berryessa in the Putah Creek watershed, Napa County (Knoxville USGS 7.5'quad map: Township 11N, Range 4W (Sections 4, 5, 6, 7, 9, 15, 16, 26; portions of Sections 3, 8, 10, 11, 14, 17, 21, 22, 23, 24, 25, 27, 35, 36); portion of Township 12N, Range 4W; Walter Springs USGS 7.5'quad map: Township 10N, Range 4W (Sections 6, 7); Township 10N, Range 5W (Sections 1, 12). Also, APN: 15-180-14, 15-180-05, 15-190-04, 15-190-01 15-220-090).

### *2.2 Project Description*

The proposed project involves the removal and control of invasive plants along the banks and associated floodplains of perennial and seasonal-flowing streams of the Eticuera Creek watershed, Napa County (Fig 1). Invasive plant control will occur within a 300-acre portion of the upper watershed (Knoxville restoration site) and in a narrow corridor (approximately 75 feet wide) along 43 miles of blue line creek that include all of Knoxville Creek, a portion of Eticuera Creek, Long Canyon, and Zim Zim Creek. Portions of Nevada Creek and Adams Creek are also included. In addition to invasive plant control, replanting of native riparian and floodplain vegetation will occur in the Knoxville restoration site (Fig 2). Project activities will occur on lands owned by the Department of Fish and Game's Knoxville Wildlife Area (KWA), Bureau of Land Management (BLM), University of California at Davis McLaughlin Reserve/Homestake Mining Company, and the privately-owned Gamble Ranch.

The primary plants proposed for removal and control are tamarisk (*Tamarix ramoissima*), and perennial pepperweed (*Lepidium latifolium*). Yellow star thistle (*Centauria solstitialis*), black mustard (*Brassica nigra*), artichoke thistle (*Cynara cardunculus)*, bull thistle (*Cirsium vulgare*), barbed goatgrass (*Aegilops triuncialis*), medusahead (*Taeniatherum caput-medusae*), tall fescue (*Lolium arundinaceum*), and Harding grass (*Phalaris aquatica*) are also be targeted for removal and control.

Tamarisk removal and control activities will be focused in areas located along the main channels of Knoxville and Eticuera Creeks in the Knoxville Wildlife Area (KWA) and include tributary streams throughout the watershed and private lands (i.e. Gamble Ranch) to the south of the KWA. Perennial pepperweed will be controlled where encountered in the watershed, but control effort will be concentrated within the 300-acre restoration area. Yellow star thistle, black mustard, artichoke thistle, bull thistle, barbed goatgrass, medusahead, tall fescue, and Harding grass removal and control will occur mostly within the 300-acre restoration area.

Plant control techniques will vary by species and will include the use of the following control methods: mowing, cutting, herbicides, and grazing. In some cases chemical control will be preceded by cutting (e.g. tamarisk) or mowing (e.g. pepperweed). In the Knoxville restoration area, invasive plant control will be followed by the planting of native vegetation along the banks

and associated uplands of Knoxville Creek. Native plants proposed for use include native grasses, sedges and rushes, and woody species such as valley oak (*Quercus lobata*), elderberry (*Sambucus* spp.), and western redbud (*Cercis occidentalis*).

*2.3 Purpose and Need*

Ecosystem function within the Eticuera Creek watershed is considered impaired at many levels due to the extensive presence of invasive non-native plants. Stream channelization has increased flow rates, accelerated erosion, prevented the regeneration of native riparian plants, and facilitated the invasion of non-native species. The loss of native riparian vegetation and the change in the morphology of the stream channel has removed habitat for vertebrates such as foothill yellow-legged frog (*Rana boylii*), western pond turtle (*Emys marmorata*), Cooper's hawk (*Accipiter cooperii*), long-eared owl (*Asio otus*), yellow- breasted chat (*Icteria virens*), Wilson's warbler (*Wilsonia pusilla*) and song sparrow (*Melospiza melodia*).

Many of the non-native species that have invaded the riparian corridor (e.g., tamarisk, perennial pepperweed, yellow starthistle, medusahead, and barbed goatgrass) are community transformers. These species replace native vegetation with extensive monocultures that results in reduced wildlife foraging, breeding and resting opportunities. Basic ecosystem processes such as stream flows, water tables, soil movement, soil salinity, nutrient cycling, and fire frequency have been altered due to the extensive presence of these invasive plants. Many of these changes create positive feedbacks that promote the further success of the invaders. Tamarisk, for example, excludes native vegetation, provides poor habitat for native birds, insects and rodents, dramatically alters the water table and deposits salt in the soil through leaf litter; its removal can restore water flows and allow the re-establishment of native riparian vegetation. Further, without weed control and active restoration, tamarisk removal potentially opens new sites for the establishment of other invasive species, particularly pepperweed. Active restoration of the riparian zone with native species is needed to increase the resistance of the riparian community against future invasions by non-native species that could become re-invaded by tamarisk. Finally, establishment of native woody riparian vegetation should help prevent bank erosion and restore the channel to a more natural hydrography.

## 3. Environmental Setting

The Eticuera Creek watershed can be subdivided into four smaller watersheds—Knoxville Creek, Zim Zim Creek, Adams Creek, and Toll Canyon. The current condition of the watershed is strongly influenced by its unique geology, which governs both its vegetation and its history of human land use. Along the western part of the watershed a series of north-trending faults separate the Great Valley Sequence to the east, formed of sediments from the ancient Sierra Nevada, from the Coast Range Ophiolite to the west, which is a large mass of oceanic crust on which the Great Valley sediments were deposited. The Coast Range Ophiolite consists primarily of serpentine and other rocks rich in iron and magnesium and supports distinctive vegetation types such as serpentine chaparral, cypress woodlands, and perennial grass and forb-lands that are home to numerous endemic species, many of which are of special management concern. Most of the main riparian corridor of Eticuera Creek is within the Great Valley formation and is

dominated by more typical foothill vegetation types such as valley and blue oak woodlands, chamise and mixed-species chaparral, and annual grasslands.

Land uses in and around the project area include public recreation and wildlife resource use activities such as hunting on the DFG Knoxville Wildlife Area and BLM lands, scientific research on the UC Davis McLaughlin Reserve/Homestake Mining Company lands, and cattle ranching on the private lands.

## 4. Summary of Potential Effects and Proposed Mitigation Measures

### *4.1 Biological Resources*

The proposed project has the low potential to adversely affect biological resources within the project area. The project proposes the use of herbicides around aquatic environments and some work activities may occur within the stream channel. However, the project has incorporated a number of feasible mitigation measures that substantially reduce the likelihood of negatively impacting sensitive biological resources. For example, work activities, if they are determined to have potential impacts, will be planned around sensitive flowering and breeding times. Work areas will be searched for the presence of sensitive species prior to the commencement of work. If sensitive species are found, work activities will be halted and sensitive species will either be removed to a nearby outside the work area (e.g. yellow-legged frog, northwestern pond turtle at a stream crossing), given a no-work buffer (e.g. around a sensitive plant population) or work activities will be suspended in the area until a less sensitive time within the species life cycle (e.g. after an occupied bird nest is determined to be no longer occupied).

The expected outcome of the proposed project, with compensation measures fully incorporated, is a reduction in the coverage of non-native invasive plants and an increase in the coverage of native plants with no significant impacts occurring to natural sensitive resources. The proposed project is believed to have an overall long-term benefit to plant and wildlife communities in and near the project area.

<u>Plants</u>

A number of rare or sensitive plant species are recorded in the Eticuera Creek watershed.

a. Adobe lily (*Fritillaria pluriflora*)

Adobe lily (CNPS list 1B) is endemic to serpentine clay soils and has been recorded at two sites within the 300-acre restoration area. Adobe lily is threatened by the invasion of non-native grasses such as medusahead (*Taeniatherum caput-medusae*) and especially barbed goatgrass (*Aegilops triuncialis*), so Adobe lily populations will benefit from the control of barbed goatgrass. Restoration activities around adobe lily populations will be limited to chemical treatment, or grazing to control invasive grasses. No ground disturbing activities (e.g. harrowing) will occur that could damage or unearth adobe lily bulbs. Adobe lily flowers in February and March, and above ground parts of the plant die back by mid spring. To avoid interrupting seed production or damaging adult plants, weed control activities will occur in late

spring and early summer, after Adobe lily seeds have dropped, and above ground parts of the plant have senesced. Herbicides will not be used within 25 feet of adobe lily plants.

b. Green jewel flower (*Streptanthus breweri* ssp. *hesperidis***)**

Green jewel flower (CNPS list 1B) is endemic to serpentine barrens. No serpentine barrens or known populations of green jewel flower occur within the proposed project area.

c. Purdy's onion (*Allium fimbriatum* var. *purdyi*)

Purdy's onion (CNPS list 4) is another species endemic to serpentine barrens and rocky areas. No such serpentine rocky areas or known populations of Purdy's onion occur within the proposed project area.

d. Modest rock cress (*Arabis modesta*)

In the Eticuera watershed, modest rock cress (CNPS list 4) is limited to sandstone bluffs at the top of Blue Ridge. Modest rock cress does not occur within the proposed project area.

e. Cleveland's milkvetch (*Astragalus clevelandii*)

Cleveland's milkvetch (CNPS list 4), along with a suite of other species on this list (swamp larkspur, serpentine sunflower, bare monkeyflower, Cleveland's butterweed, and marsh zigadenus), is endemic to serpentine seeps and occurs in several sites within the 300-acre restoration area. Most serpentine seeps in the restoration area are still pristine, and will be excluded from restoration and weed control activities. However, some serpentine seeps are threatened by invasion of perennial pepperweed and barbed goatgrass. In these areas, preservation of the endemic serpentine seep flora will require eradication of these two invasive species. Chemical control of perennial pepperweed in serpentine seeps will be conducted carefully with hand sprayers to avoid inadvertently spraying sensitive seep plants. Weeds within 25 feet of Cleveland's milkvetch will be pulled by hand. Control of barbed goat grass within serpentine wet area will be done with hand pulling to avoid damage to native seep plants.

f. Serpentine collomia (*Collomia diversiloba*)

Serpentine collomia (CNPS list 4) occurs on serpentine barrens, and rocky areas and openings within serpentine chaparral. Serpentine collomia is recorded adjacent to the 300-acre restoration area. No weed control or restoration activities will occur near known serpentine collomia populations or its habitat.

g. Swamp larkspur (*Delphinium uliginosum*)

Swamp larkspur (CNPS list 4) is endemic to serpentine seeps and wet areas in association with a distinctive suite of rare species. Potential impacts and mitigation measures for these species are described above under Cleveland's milkvetch.

h. Purdy's fritillary (*Fritillaria purdyi*)

Purdy's fritillary (CNPS list 4) is another species endemic to serpentine barrens and rocky areas. No such serpentine rocky areas or known populations of Purdy's fritillary occur within the proposed project area.

i. Serpentine sunflower (*Helianthus exilis*)

Serpentine sunflower (CNPS list 4) is another serpentine seep endemic that occurs within the project area. Potential impacts and mitigation measures for these species are described above under Cleveland's milkvetch.

j. Hoover's lomatium (*Lomatium hooveri*)

Hoover's lomatium (CNPS, list 4) is endemic to serpentine grasslands, and is recorded within the 300-acre restoration area. Like adobe lily and other serpentine grassland endemics, Hoover's lomatium is threatened by invasion of non-native grasses such as medusahead and barbed goatgrass. Weed control and restoration activities within serpentine grasslands will target these invaders with minimal damage to serpentine endemics. Techniques to target invasive grasses while protecting serpentine endemics such as Hoover's lomatium will include the use of grass-specific herbicides during early summer when serpentine endemics are dormant.

k. Heller's bush mallow (*Malacothamnus helleri*)

Heller's bush mallow (CNPS list 4) occurs in post-fire chaparral. No chaparral habitat or known populations of Heller's bush mallow occur within the project area.

l. Sylvan microseris (*Microseris sylvatica*)

In the Eticuera watershed Syvan microseris (CNPS list 4) is known only to occur along the grassy ridge separating Foley from Knoxville Creek. This, ridge is outside the proposed project area.

m. Bare monkeyflower (*Mimulus nudatus*)

Bare monkeyflower (CNPS list 4) is another serpentine seep endemic that occurs within the project area. Potential impacts and mitigation measures for these species are described above under Cleveland's milkvetch.

n. Green coyote mint (*Monardella viridis* ssp. *viridis*)

Green coyote mint (CNPS list 4) occurs on steep slopes, and is common in Napa County. Weed control and restoration activities will not occur in the steep wooded habitat where coyote mint is likely to be found.

o. Jepson's navarretia (Navarretia jepsonii)

Jepson's navarretia (CNPS list 4) is an annual forb endemic to serpentine grasslands. It is not recorded in the project area, but could occur within the 300-acre restoration site, likely in association with other serpentine grassland endemics such as Hoover's lomatium and Adobe lily. Potential impacts to and mitigation measures for Jepson's navarretia are similar to those for Hoover's lomatium,

p. Cleveland's butterweed (*Senecio clevelandii*)

Cleveland's butterweed (CNPS list 4) is another serpentine seep endemic that occurs within the project area. Potential impacts and mitigation measures for these species are described above under Cleveland's milkvetch.

q. Marsh zigadenus (*Zigadenus micranthus* var *fontanus*)

Marsh zigadenus (CNPS list 4) is another serpentine seep endemic that occurs within the project area. Potential impacts and mitigation measures for these species are described above under Cleveland's milkvetch.

Vertebrates

a. Foothill yellow-legged frog (*Rana boylii*)

Foothill yellow-legged frog is a California Species of Special Concern. Foothill yellow legged frogs are stream specialists requiring pebble/cobble river bars, and relatively slow moving water with a combination of riffles and pools and moderate shading. They prefer open, sunny stretches of stream with rocks and shallow riffles. Breeding sites include shallow, slow moving water with gravel and cobble substrate. Moderately vegetated backwaters and isolated pools or other slow moving waters with mud substrate may also provide suitable habitat. Foothill yellow-legged frogs are known to occur within the project area including Zim Zim Creek and Eticuera Creek.

Significant negative impacts to foothill yellow-legged frog are not expected to occur from the removal and control of riparian invasive plants such as tamarisk and pepperweed since most riparian area work will be limited to the top of stream banks. If work activities require workers to step within the channel and on immersed cobble/gravel bars, a qualified biologist (or trained field technician) will search the area for foothill yellow-legged frog and/or their egg masses prior to the worker entering the stream channel and relocate frogs and egg masses, if found, immediately upstream of the work area. Also, impacts to foothill yellow-legged frog could occur if vehicles pass through live streams without watercourse crossing structures. To avoid adverse direct impacts to foothill yellow-legged and egg masses, prior to the vehicle crossing, a qualified biologist (or trained field technician) will search and clear the area of foothill yellow-legged frog prior to the vehicle crossing. Also, only All-Terrain Vehicles (ATV) and not pick-up trucks will be allowed to cross wetted channel crossings, lessening the overall footprint of the impact.

To maintain optimum stream and air temperature and humidity, riparian plantings as part of re-vegetation activities will be limited to maintain an open canopy. Further, the shallow riffles and pools preferred by yellow-legged frogs are in some areas overgrown with perennial pepperweed, so pepperweed removal should also improve habitat for the foothill yellow-legged frog.

b. California red-legged frog (*Rana aurora draytonii*)

The California red-legged frog is listed as federal Threatened and is a California Species of Special Concern. The nearest documented California red-legged frog is approximately 20 miles south of the proposed project area in the Capell Valley of Napa County. California red-legged frogs inhabit permanent and ephemeral ponds and still and slow-moving waters dominated by willow (*Salix* spp.), cattail (*Typha* spp.) and bulrushes (*Scirpus* spp.). The project area does not contain permanent or ephemeral ponds, and free water is not present (or only present in very small shallow pools) within Eticuera Creek and its tributaries throughout the summer and late fall months. As such, the project area does not contain suitable habitat for California red-legged frog. No impacts to this species are expected.

c. Northwestern pond turtle (*Actinemys marmorata marmorata* )

Northwestern pond turtle is a California Species of Special Concern. Northwestern pond turtle is associated with permanent or nearly permanent water in a wide variety of habitat types including permanent ponds, lakes, streams, irrigation ditches and permanent pools along intermittent streams. Pond turtles require sunny basking sites such as partially submerged logs, rocks, mats of floating vegetation, or open mud banks. Despite being highly associated with aquatic environments, females during spring move overland for up to 100 m (325 ft) to find suitable sites for egg-laying. Northwestern pond turtles have been observed within the project area including Zim Zim Creek and Eticuera Creek.

As for foothill yellow-legged frog, significant adverse project impacts to northwestern pond turtle are not expected. Northwestern pond turtles are typically very wary and will often dive quickly from basking sites into pools and hide under rocks, root masses, and vegetation upon being disturbed. However, if work activities require workers to step within the wetted channel, a qualified biologist (or trained field technician) will search pools for the presence of pond turtle and relocate turtles to suitable pools immediately upstream of the work area. Also, if work along stream banks is conducted during the northwestern pond turtle egg-laying season (April to August), the work area will be searched by a qualified biologist (or trained field technician) prior to the commencement of work in the area. If pond turtles are found on the stream banks or associated uplands where work activities are to occur, work in the area, including the use of vehicles near the stream banks, will cease immediately and not resume until a qualified biologist (or trained field technician) determines that pond turtles have left the work area. As for yellow-legged frog, prior to an ATV crossing a wetted stream channel, a qualified biologist (or trained field technician) will search and clear the area of northwestern pond turtle prior to the vehicle crossing.

Because northwestern pond turtle prefer open, sunny areas for basking, riparian plantings as part of re-vegetation activities will be limited to maintain a moderate to open canopy.

d. Bald Eagle (*Haliaeetus leucocephalus* )

The bald eagle is State- listed endangered but has been federally delisted. Bald eagle has been recorded near the Adams Creek and Eticuera Creek confluence, located immediately south of the project area. The bald eagle's main food source is fish, and nearby Lake Berryessa may provide adequate foraging resources for this species. The project area does not contain any suitable foraging habitat for bald eagle, however, potential suitable large-diameter nest trees may be present near the project site. Prior to work activities, a qualified biologist (or trained field technician), will survey the area for nesting bald eagles. If a nesting bald eagle is found, work within 0.5 mile of the nest site will cease until the nest is determined to be no longer occupied.

e. Golden Eagle (*Aquila chrysaeto*)

Golden eagle is considered by the State to be Fully Protected. Napa County is within both the summer and winter ranges for the golden eagle and observations of golden eagle have been made within the southern portion of the Eticuera Creek watershed but outside the footprint of the project area. Golden eagles forage in areas with large open grassy areas while nesting habitat is usually on cliffs or in large trees that are in the open. The project area does contain potential foraging habitat (e.g. 300-acre restoration site), however, adverse impacts to golden eagle foraging habitat are not expected due to the availability of large expanses of foraging habitat surrounding the restoration site. Also, restoration is expected to result in improved habitat conditions for local mammal communities, which golden eagle rely on for food. Prior to work activities, a qualified biologist (or trained field technician), will survey the area for nesting bald eagles. If a nesting bald eagle is found, work within 0.5 mile of the nest site will cease until the nest is determined to be no longer occupied.

f. Prairie falcon (*Falco mexicanus)*

Prairie falcons are on the Department of Fish and Game Watch List. Prairie falcons are birds of prey and considered uncommon permanent residents in California. Prairie falcons inhabit arid, open regions of California, and are associated primarily with perennial grasslands, savannahs, rangeland, some agricultural fields, and desert scrub areas. Nesting usually occurs in a scrape on a sheltered ledge of a cliff overlooking a large, open area. Prairie falcon nesting has been observed on sandstone bluffs located to the east of the project area. Foraging on the Knoxville Wildlife Area has not been recorded suggesting that their home range includes an expansive area far beyond the proposed project area.

No adverse impacts to prairie falcon are expected to result from the proposed project. Prairie falcon nesting habitat will not be modified and work activities will occur well away from nesting areas. Restoration of the upland area will likely benefit prairie falcon foraging habitat by improving the quality of habitat available to prey species such as hare and large-sized rodents.

g. Long-eared owl (*Asio otus*)

Long-eared owl is considered a California Species of Special Concern. Long-eared owls occur year-round in California. This species typically occupies bottomlands with tall willows and cottonwoods, but also belts of live oaks, particularly paralleling stream courses. It also requires nearby open terrain for hunting. A long-eared owl was documented nesting on the Knoxville Wildlife Area outside the project area in 1990 (Napa-Solano Audubon 2003).

Adverse impacts to long-eared owl are not expected since nesting habitat will not be modified. However, work activities in riparian areas with trees (e.g. coast live oak) that could serve as long-eared owl nest trees, could disturb nesting owls. Therefore, prior to work in riparian areas during the long-eared owl nesting season (February to June), a qualified biologist (or trained field technician), will survey the area for nesting owls. If a nesting owl is found, work in the area will cease until the nest is determined to be no longer occupied. The restoration of the upland area will likely improve habitat conditions for long-eared owl prey items such as small mammals.

h. Burrowing owl (*Athene cunicularia*)

Burrowing owl is considered a California Species of Special Concern. Burrowing owl has been recorded immediately to the south of the project area. Burrowing owls are generally found in low-lying grassland areas and require open habitats that contain suitable nesting burrows, usually with short grasses and sparse shrubs. Habitat for burrowing owl is present within the 300-acre restoration site. Therefore, prior to work in the restoration area during the burrowing owl nesting season (January to June), a qualified biologist (or trained field technician), will survey the area for nesting owls. If a nesting owl is found, work in the area will cease until the nesting burrow is determined to be no longer occupied. The restoration of the upland area will likely improve habitat conditions for burrowing owl by reducing overall grass height, which will aid in prey detection and prey capture success.

i. California sage sparrow (*Amphispiza belli*)

California sage sparrows occupy shrub lands in which shrubs do not form a closed canopy, but instead are separated by areas of bare ground or native forb cover. In the vicinity of the Knoxville Wildlife Area they appeared most abundant in chamise chaparral that had recently burned. They also occur in chaparral growing on serpentine substrates, which tends to be more open than non-serpentine chaparral.

Impacts to this species are not expected because the proposed project will not occur in habitat types used by sage sparrows.

*4.2 Cultural Resources*

Cultural resource surveys have identified significant prehistoric archaeological resources in the Eticuera Creek watershed (Knoxville Wildlife Area Management Plan 2005), including in areas along Eticuera Creek and its tributaries and within approximately three miles of the 300-acre restoration site. Ground-disturbing activities will occur within the restoration site and sensitive artifacts could be impacted by site preparation (e.g. harrowing, grazing) prior to planting of

native plants. However, the control of tamarisk and pepperweed that will occur outside of the 300-acre restoration area will not involve ground disturbance and will not likely cause adverse impacts to sensitive archeological resources.

Within the 300-acre restoration area, ground disturbing activities (e.g. harrowing, grazing) are proposed as potential tools for site preparation. The restoration area includes the site of the historic mining town of Knoxville, which has no standing structures, but has numerous surface and subsurface structural remains. Other significant artifacts may also be present. To avoid adversely affecting sensitive artifacts, a records search of the Northwestern Information Center will be conducted. In addition, prior to any ground disturbing activities such as harrowing or grazing on the 300-acre site, a field assessment will be conducted by a qualified archeologist. If sensitive resources are found, the area supporting the artifact will not be disturbed and at the advice of the archeologist, a no-disturbance buffer will be placed around the artifact. If human remains are encountered within the restoration area, work will halt in the vicinity and the County Coroner will be notified. A qualified archaeologist will be contacted to evaluate the situation. If human remains are of Native American origin, the Coroner must notify the Native American Heritage Commission within 24 hours of this identification.

*4.3 Hazards and Hazardous Materials*

Herbicides will be used to control non-native invasive plant species, some of which occur near aquatic environments. Herbicides, if improperly used could be harmful to native plants and animals. However, the types of herbicides used will be selected by a licensed herbicide applicator and all herbicides used in the vicinity of standing water will be registered for use in aquatic environments. The most minimal amount of herbicide will be used to achieve the desired effect and all work will be conducted under the supervision of a licensed herbicide applicator. Spill kits will be on board all transport vehicles, and herbicides will be mixed and transported in batches of 100 gallons or less to minimize impacts of accidental spills. Herbicides will be mixed at minimum 100 feet from any aquatic environment.

*4.4 Hydrology and Water Quality*

Water quality could be adversely affected by the application of herbicides near aquatic environments and by stream bank erosion caused by crossing streams. Degradation of water quality through improper use of herbicides or excessive sediment delivery could adversely affect reproduction in aquatic associated species such as northwestern pond turtle and foothill yellow-legged frog. However, measures described above to avoid and minimize adverse effects from herbicides will be used. Also, sediment delivery to watercourses will be avoided and minimized by crossing dry portions of stream where possible, and by only allowing the use of ATV's through wet stream crossings. All ATV's that cross streams will be inspected daily for leakages and discharges of engine oil lubricants.

*4.5 Transportation/Traffic*

The project will result in minor additional traffic on Berryessa-Knoxville Road from vehicles used in invasive species control and restoration activities. Project activities will occur on

weekdays when public traffic on the road is negligible. However, to reduce potential traffic impacts, all vehicles working in the right of way will be equipped with amber warning lights. Flagmen and warning signs will be used if any activity will result in a significant temporary traffic hazards along Berryessa-Knoxville Road.

*4.6 Monitoring Plan*

Regular monitoring of the treated and restored sites will be necessary to detect any re-growth of invasive species and ensure successful establishment of native species. If re-growth occurs, additional effort will be made to eradicate although the treatment plan anticipates nearly full eradication of the targeted species during the project period. Restoration success will be monitored over the long-term and supplemented with additional plantings as needed. The success of control efforts on other species within the flood plain site will be monitored to ensure that effective maintenance techniques continue to be implemented, using the indicated mechanical and chemical treatments. An early detection and treatment plan will be an outgrowth of the cooperative management plan by the watershed partners.

Baseline assessment and mapping will be used to assess and quantify the results of the proposed activities. In years 3-5, regular visits to project sites will be made for maintenance purposes but also to evaluate the success of invasive control methods and plantings. Comprehensive re-mapping of sites will identify reductions in targeted species, re-occurrences and nascent populations, and success of plantings. Following the project period, long-term monitoring will occur on an annual basis to evaluate the success of project efforts and as part of an on-going cooperative management effort among the partners. The Eticuera Stewardship Committee will oversee this effort and continue to update and advise individual partners and landowner participants on how best to maintain the project investment.

## Responsible and Trustee Agencies

The project is proposed within the jurisdiction of the California Department of Fish and Game (DFG) and as such requires a 1600 Streambed Alteration Agreement.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:
The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

| | | | | | |
|---|---|---|---|---|---|
| | Aesthetics | | Agriculture Resources | | Air Quality |
| X | Biological Resources | X | Cultural Resources | | Geology /Soils |
| | Hazards & Hazardous Materials | X | Hydrology / Water Quality | | Land Use / Planning |
| | Mineral Resources | | Noise | | Population / Housing |
| | Public Services | | Recreation | | Transportation/Traffic |
| | Utilities / Service Systems | | Mandatory Findings of Significance | | |

DETERMINATION: (To be completed by the Lead Agency)
On the basis of this initial evaluation:

| | |
|---|---|
| | I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared. |
| X | I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared. |
| | I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required. |
| | I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed. |
| | I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required. |

## 5. Environmental Checklist

The following environmental checklist is a summary of the potential for environmental impacts from the proposed Project. The source for the checklist is Appendix G of the CEQA Guidelines, as updated.

| | Potentially Significant Impact | Less Than Significant With Mitigation Incorporation | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| I. AESTHETICS -- Would the project: a) Have a substantial adverse effect on a scenic vista? | ☐ | ☐ | ☐ | x |
| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | ☐ | ☐ | ☐ | x |
| c) Substantially degrade the existing visual character or quality of the site and its surroundings? | ☐ | ☐ | ☐ | x |
| d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area? | ☐ | ☐ | ☐ | x |

Discussion:

a-d Parts of the project area may be visible from remote high points within the Knoxville Wildlife Area and the Knoxville Recreation Area, but project activities will not be evident at these distances. Ultimately, increased native vegetation will improve scenic vistas. Existing scenic resources (primarily trees) will be protected as part of the proposed project. Much of the project site, including the 300-acre restoration area is visible from Berryessa-Knoxville Rd. Over the long term, additional native riparian vegetation within the restoration area will substantially enhance the natural visual character of the site, which is currently denuded of trees and shrubs.

II. AGRICULTURE RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:

| | | | | |
|---|---|---|---|---|
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | | | | x |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | | | | x |
| c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use? | | | | x |

Discussion:

a-c The project would not affect prime farmland or primary agricultural lands uses, or convert farmland to non-agricultural use. The project area includes natural conservation areas, where outdoor recreation, scientific research take place. Also, portions of the project area are in private ownership and are zoned Agricultural Watershed by the County of Napa. These lands are used mainly for livestock grazing. Weed control and riparian restoration are consistent with this zoning (Napa County Code 18.108.025 and 18.108.025).

III. AIR QUALITY -- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

| | | | | |
|---|---|---|---|---|
| a) Conflict with or obstruct implementation of the applicable air quality plan? | | | | x |
| b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? | | | | x |
| c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)? | | | | x |
| d) Expose sensitive receptors to substantial pollutant concentrations? | | | | x |
| e) Create objectionable odors affecting a substantial number of people? | | | | x |

Discussion:

a-e The project area is within the Bay Area Air Quality Management District (BAAQMD). However, prescribed burning is not proposed as a potential tool for site preparation within the Knoxville restoration site.

IV. BIOLOGICAL RESOURCES -- Would the project:

| | | | | |
|---|---|---|---|---|
| a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | | x | | |
| b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or US Fish and Wildlife Service? | | x | | |
| c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | | | | x |
| d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? | | | | x |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | | | | x |
| f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? | | | | x |

Discussion:
a-b A number of California Species of Special Concern have been recorded in the project area, including the western pond turtle, foothill yellow-legged frog, and long-eared owl. A number of sensitive plant species also occur in the project area: Adobe lily (CNPS list 1B), Cleveland's milkvetch, swamp larkspur, serpentine sunflower, bare monkeyflower, Cleveland's butterweed, and marsh zigadenus (all CNPS list 4). All actions proposed in this project are designed to increase or protect populations of these species.

All sensitive plants in the study area, with the exception of adobe lily occur in association with serpentine seeps. Adobe lily occurs in serpentine grasslands with clay soils. Within the project area, both of these serpentine habitats are being invaded by pepperweed and barbed goatgrass. Removal of these invaders should increase populations of all of these sensitive plant species. This project is designed to improve riparian habitat by removing invasive riparian species and planting native riparian species. Prior to any disturbance near serpentine wetland seeps, a qualified botanist (or trained field technician) will survey the area for sensitive plants. If sensitive plants are found, then invasive weeds will be hand-pulled if they occur within 25 feet of a sensitive plant. Herbicides will not be applied within 25 feet of a sensitive plant.

Surveys for sensitive plants were conducted in the 300-acre restoration site and along the Eticuera Creek riparian corridor in 2003 and 2004 for the Knoxville Wildlife Area Management Plan. No sensitive species within these areas were documented

Foothill yellow legged frogs and western pond turtles are both aquatic species known to occur within the project area. If workers and vehicles are required to tread on stream cobble/gravel bars or work within live water, a qualified biologist (or trained field technician) will search the area of direct impact and relocate any western pond turtle and foothill yellow-frogs immediately upstream of the area of direct impact. To maintain and improve foothill yellow-frog and western pond turtle habitat, riparian planting will be limited to maintain an open canopy. The shallow riffles and pools preferred by yellow-legged frogs are in some areas overgrown with perennial pepperweed, so pepperweed removal should also improve habitat for the foothill yellow-legged frog. Also, aquatic habitat features preferred by western pond turtle such as emergent basking sites, emergent vegetation, undercut banks, submerged vegetation, rocks, and logs will be enhanced by restoring Eticuera Creek to a more natural hydrography and by restoring native riparian vegetation.

Although the project is unlikely to affect long-eared owl, golden eagle, bald eagle, and burrowing owl and their habitats, work activities, if conducted near a nest of these species and during their breeding seasons, could adversely affect breeding success through disturbance. As such, appropriately-timed surveys by a qualified biologist or trained field technician will be performed. If a nesting long-eared owl, golden eagle, bald eagle, or burrowing owl is found, all work in the area will cease until the nest is determined by the biologist or technician, to be not occupied.

To minimize impacts to breeding passerine birds, prior to removal of tamarisk, individual tamarisk trees will be searched for bird nests by a qualified biologist or trained field technician. If a nest is found, it will be flagged in the field and be given a 100-foot buffer where no tamarisk will be removed until after the young have fledged as determined by a qualified biologist or trained field technician. Impacts to breeding birds within the riparian area will also be minimized since control activities will occur in July, which is at or near the end of the breeding season for many bird species.

If livestock grazing is used as a tool for site preparation in the 300-acre upland restoration site, all livestock will be excluded from any riparian areas using fencing, including electric fencing if needed. Fencing will be checked periodically and any portions found damaged or in disrepair will be immediately repaired.

c, This project does not involve filling or alteration of wetlands.

d, This project will improve breeding sites for avian and mammalian wildlife species, and will introduce no barriers to wildlife movement.

e, This project is consistent with Napa County ordinances to protect flood plains and riparian areas.

f, There is no single or multiple species HCP or NCCP that applies to the project area.

V. CULTURAL RESOURCES -- Would the project:

| | | | | |
|---|---|---|---|---|
| a) Cause a substantial adverse change in the significance of a historical resource as defined in § 12564.5? | | x | | |
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 12564.5? | | x | | |
| c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | | | | x |
| d) Disturb any human remains, including those interred outside of formal cemeteries? | | x | | |

Discussion:
a-b, Several cultural resource studies have occurred within the Eticuera Creek watershed documenting significant historic resources. Control of tamarisk and pepperweed outside of the 300-acre restoration area will not involve ground disturbance, and will not likely cause adverse changes in these resources. Within the 300-acre restoration area, ground disturbing activities (e.g. harrowing, grazing) are proposed as potential tools for site preparation. To avoid disrupting historic resources, a records search of the Northwestern Information Center will be conducted. Also, a qualified archeologist will conduct a field survey prior to ground site preparation. Harrowing in particular will occur away from documented historic sites, areas where there are obvious surface remains, and areas where structures are indicated on historic maps and newly revised. Grazing will be the preferred method of site preparation in areas with concentrations of historic resources.

c, The project will not disturb paleontological resources or geologic features.

d, No documented human burial sites occur with 300-acre portion of the project area where ground disturbing work (harrowing, grazing) will occur. The historic Knoxville cemetery is upslope and outside of the restoration area. If human remains are encountered within the restoration area, work will halt in the vicinity and the County Coroner will be notified. A qualified archaeologist will be contacted to evaluate the situation. If human remains are of Native American origin, the Coroner must notify the Native American Heritage Commission within 24 hours of this identification.

VI. GEOLOGY AND SOILS -- Would the project:

| | | | | |
|---|---|---|---|---|
| a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: | | | | x |
| i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. | | | | x |
| ii) Strong seismic ground shaking? | | | | x |
| iii) Seismic-related ground failure, including liquefaction? | | | | x |
| iv) Landslides? | | | | x |
| b) Result in substantial soil erosion or the loss of topsoil? | | | | x |
| c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? | | | | x |
| d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? | | | | x |
| e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater? | | | | x |

Discussion:
a-e The project does not include any structures or activities that would expose people to risk from seismic activity or landslides. Planting of native vegetation will decrease surface runoff and reduce erosion and loss of topsoil. The project will not increase the potential for on or off site landslide, lateral spreading, subsidence, liquefaction or collapse. The project will not involve structures or activities in which expansive soils could lead to risks to life or property. The project will not involve the disposal of wastewater.

VII. HAZARDS AND HAZARDOUS MATERIALS -- Would the project:

| | | | | |
|---|---|---|---|---|
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | | x | | |

| | | | | |
|---|---|---|---|---|
| b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? | | x | | |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | | | | x |
| d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? | | | | x |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? | | | | x |
| f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? | | | | x |
| g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | | | | x |
| h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? | | | x | |

Discussion:

a, The project involves use of herbicides. All herbicides proposed for use in this project carry a signal word of "Caution." All herbicide work will occur under the supervision of a licensed pesticide applicator. All personnel transporting or applying herbicides will be instructed by a licensed pesticide applicator on proper procedures for handling and applying pesticides. All transport vehicles will be equipped with spill kits.

b, Herbicides will be mixed and transported in batches of 100 gallons or less to minimize impacts of accidental spills. All transport vehicles will be equipped with spill kits.

c, There are no schools existing or proposed within ¼ mile of the project area.

d, The project site is not on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

e, The project is not within an airport land use plan or within two miles of a public airport.

f, The project is not in the vicinity of a private airstrip.

g, The project would not interfere with any emergency response or evacuation plan.

VIII. HYDROLOGY AND WATER QUALITY -- Would the project:

| | | | | |
|---|---|---|---|---|
| a) Violate any water quality standards or waste discharge requirements? | | | | x |

| | | | | |
|---|---|---|---|---|
| b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? | | | | x |
| c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site? | | | x | |
| d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site? | | | x | |
| e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff? | | | | x |
| f) Otherwise substantially degrade water quality? | | x | | |
| g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? | | | | x |
| h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows? | | | | x |
| i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? | | | | x |
| j) Inundation by seiche, tsunami, or mudflow? | | | | x |

Discussion:

a, The proposed project will not violate any water quality standards or waste discharge requirements.

b, The project will not affect groundwater supplies.

c, Planting of native vegetation and possible installation of erosion control geotextiles will reduce surface runoff on site and will reduce erosion and siltation off site. Increased flooding and siltation may occur on site, as the addition of native vegetation should return the creek to a more meandering course and the existing flood plain to a more natural cycle. In turn this upstream effect should decrease erosion and sediment input to Lake Berryessa.

d, The project includes a hydrological study to guide restoration activities at the 300-acre restoration site. Planting of native vegetation will reduce surface runoff. The goal of the project is to restore flooding and sedimentation in natural floodplains and to prevent erosion and sediment transport downstream.

e, The project will not affect existing or planned stormwater drainage systems.

f, The project involves application of herbicide near water and the use of vehicles to cross stream channels. Water quality could potentially be harmed by improper application of herbicide or by erosion and sedimentation caused by vehicle use. All herbicides used in the vicinity of standing water will be registered for use in aquatic environments. All herbicide use will be supervised by a licensed pesticide applicator.

In the 300-acre restoration area, preexisting culverts allow vehicle access without driving in the stream channel. Outside of the restoration area, vehicle use will be limited to historic ranch roads and wetted crossings will only occur using a minimal number of ATV's. Vehicle use to control tamarisk and pepperweed will be concentrated in the late spring and early summer, when stream flows are relatively low. This will minimize any sedimentation caused by eroding stream banks while fording creeks.

The use of motor vehicles and equipment near creeks could result in the discharge of fuels and oil during operation. However, the proposed project will ensure that equipment and vehicles operated near creeks shall be checked and maintained to prevent leaks and discharges of materials to surface waters. In addition, all fueling and maintenance activities shall occur away from creek channels. Vehicles and equipment will be stored off-site or in the existing Knoxville barn, which has been historically used for equipment storage.

g, j, The project does not involve housing, the placement of structures.

h, The project may involve increased localized flooding in upstream uninhabited areas, but will decrease flood risk in downstream inhabited areas.

i, The project is not in an area subject to seiche, tsunami, or mudflow.

IX. LAND USE AND PLANNING - Would the project:

| | | | | |
|---|---|---|---|---|
| a) Physically divide an established community? | | | | x |
| b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? | | | | x |
| c) Conflict with any applicable habitat conservation plan or natural community conservation plan? | | | | x |

Discussion:
a-c , The project is not near an established community. Habitat restoration activities are permitted in the Agricultural Watershed Zone (on private lands within the project area) and are compatible with the Napa County General Plan. The Napa County General Plan contains policies that support managed activities to improve riparian wildlife corridors. The project is also consistent with the Department of Fish and Game Knoxville Wildlife Area Management Plan, which provides for habitat restoration and invasive species control. There are no HCPs or NCCPs specific to the project area.

X. MINERAL RESOURCES -- Would the project:

| | | | | |
|---|---|---|---|---|
| a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? | | | | x |

| | | | | |
|---|---|---|---|---|
| b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? | | | | x |

Discussion:
a, b, The project will not affect the availability of mineral resources. The project area does not include a locally-important mineral resource recovery site.

XI. NOISE -- Would the project result in:

| | | | | |
|---|---|---|---|---|
| a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | | | | x |
| b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? | | | | x |
| c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? | | | | x |
| d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? | | | | x |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? | | | | x |
| f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? | | | | x |

Discussion:
a-f, The project would result in only short-term and minor increases in noise levels when vehicles and equipment are used for invasive species control and site preparation. The project will generate no groundborne vibration or noise, and will not have a permanent effect on ambient noise levels. Only minor and short-term (several days) effects on ambient noise levels are expected. The project is not located within an airport land use plan, nor is it within two miles of any airport and is not in the vicinity of a private airstrip.

XII. POPULATION AND HOUSING -- Would the project:

| | | | | |
|---|---|---|---|---|
| a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? | | | | x |
| b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? | | | | x |
| c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? | | | | x |

Discussion:
a-c The project will not induce population growth either directly or indirectly, affect existing housing, or displace people since the project area includes public and private open space and agricultural lands.

XIII. PUBLIC SERVICES --

| | | | | |
|---|---|---|---|---|
| a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: | | | | x |
| Fire protection? | | | | x |
| Police protection? | | | | x |
| Schools? | | | | x |
| Parks? | | | | x |
| Other public facilities? | | | | x |

Discussion:
The proposed project has no facilities associated with it and therefore would have no need for public services above those already in place.

XIV. RECREATION –

| | | | | |
|---|---|---|---|---|
| a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | | | | x |
| b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment? | | | | x |

Discussion:
a-b The project area includes open space and agricultural lands and does not contain recreational facilities.

XV. TRANSPORTATION/TRAFFIC -- Would the project:

| | | | | |
|---|---|---|---|---|
| a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)? | | | x | |
| b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways? | | | | x |
| c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? | | | | x |

| | | | | |
|---|---|---|---|---|
| d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | | | | x |
| e) Result in inadequate emergency access? | | | | x |
| f) Result in inadequate parking capacity? | | | | x |
| g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)? | | | | x |

Discussion:
a, The project will result in minor additional traffic on Berryessa-Knoxville Road from vehicles used in invasive species control and restoration activities. Project activities will occur on weekdays when public traffic on the road is negligible; most public use of the road is on weekends.

b-g, The project will not exceed a level of service standard, or affect air traffic patterns. However, the project will introduce only minor hazards from the presence of vehicles (generally only one or two at a time) and equipment in the Berryessa-Knoxville Road right of way during weed management activities. All vehicles working in the right of way will be equipped with amber warning lights. Flagmen and warning signs will be used if any activity will result in a significant temporary traffic hazards along Berryessa-Knoxville Road. The project will not affect emergency access, parking, or conflict with any adopted transportation policies.

XVI. UTILITIES AND SERVICE SYSTEMS -- Would the project:

| | | | | |
|---|---|---|---|---|
| a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? | | | | x |
| b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | | | | x |
| c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | | | | x |
| d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? | | | | x |
| e) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? | | | | x |
| f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? | | | | x |
| g) Comply with federal, state, and local statutes and regulations related to solid waste? | | | | x |

Discussion:
a-f There is no need for water supply, wastewater treatment, or storm water runoff channelization for this proposed project or require disposal of any debris or waste. The project will comply with all applicable federal, state, and local regulations.

XVII. MANDATORY FINDINGS OF SIGNIFICANCE –

| | | | | |
|---|---|---|---|---|
| a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | | | | x |
| b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)? | | | | x |
| c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly? | | | | x |

## 6. References

Knoxville Wildlife Area Management Plan. October 2005. California Department of Fish and Game. Resources Agency. Sacramento, CA.

Biogeographic Information and Observation System (BIOS). Calif. Dept. of Fish and Game. October 15, 2008.

Breeding Bird of Napa County, California. 2003. Ann Smith (ed). Napa-Solano Audubon Society. 206 pp.

## 7. Appendices

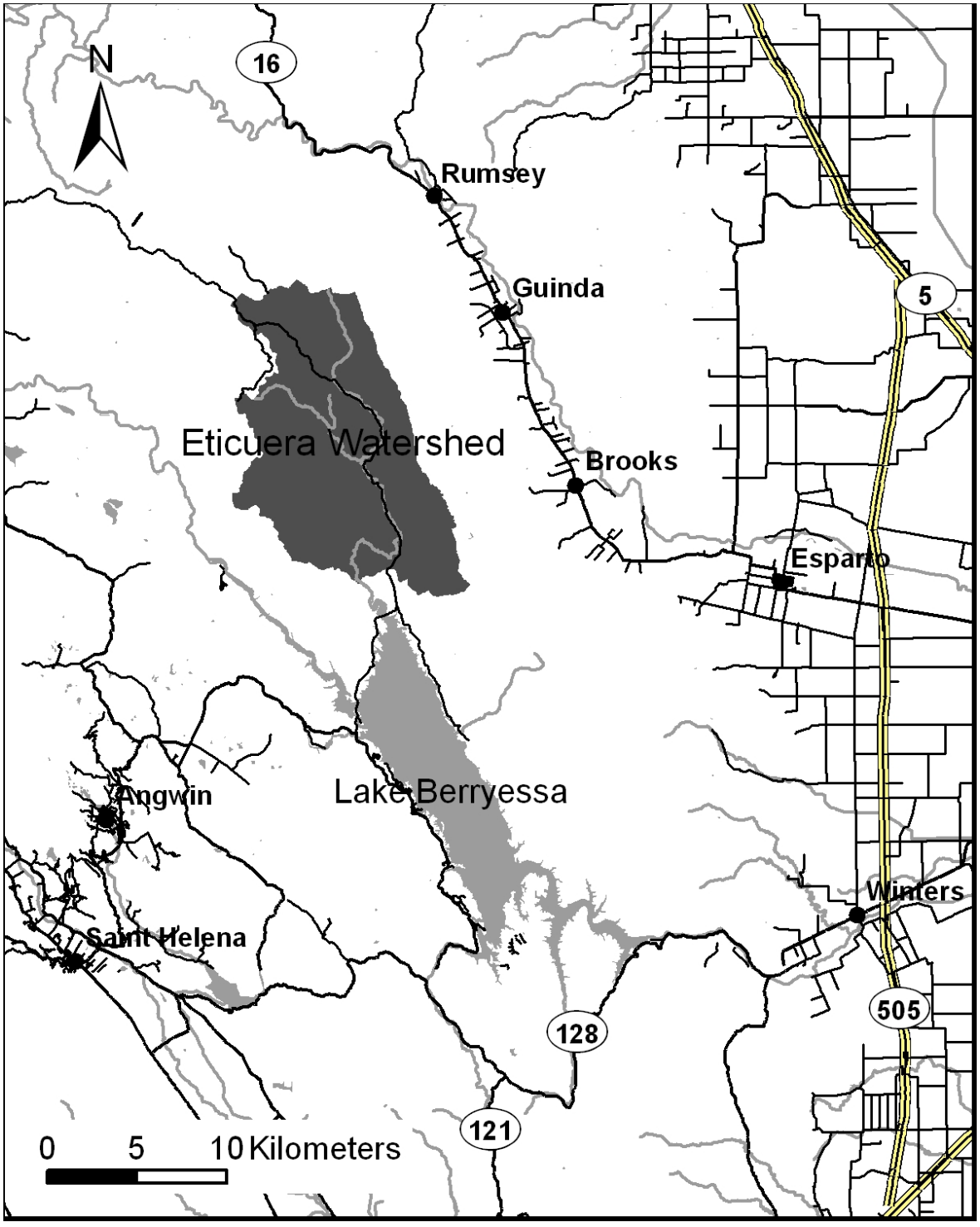


Figure 1. Location of the Eticuera watershed located in the northeast portion of Napa County.

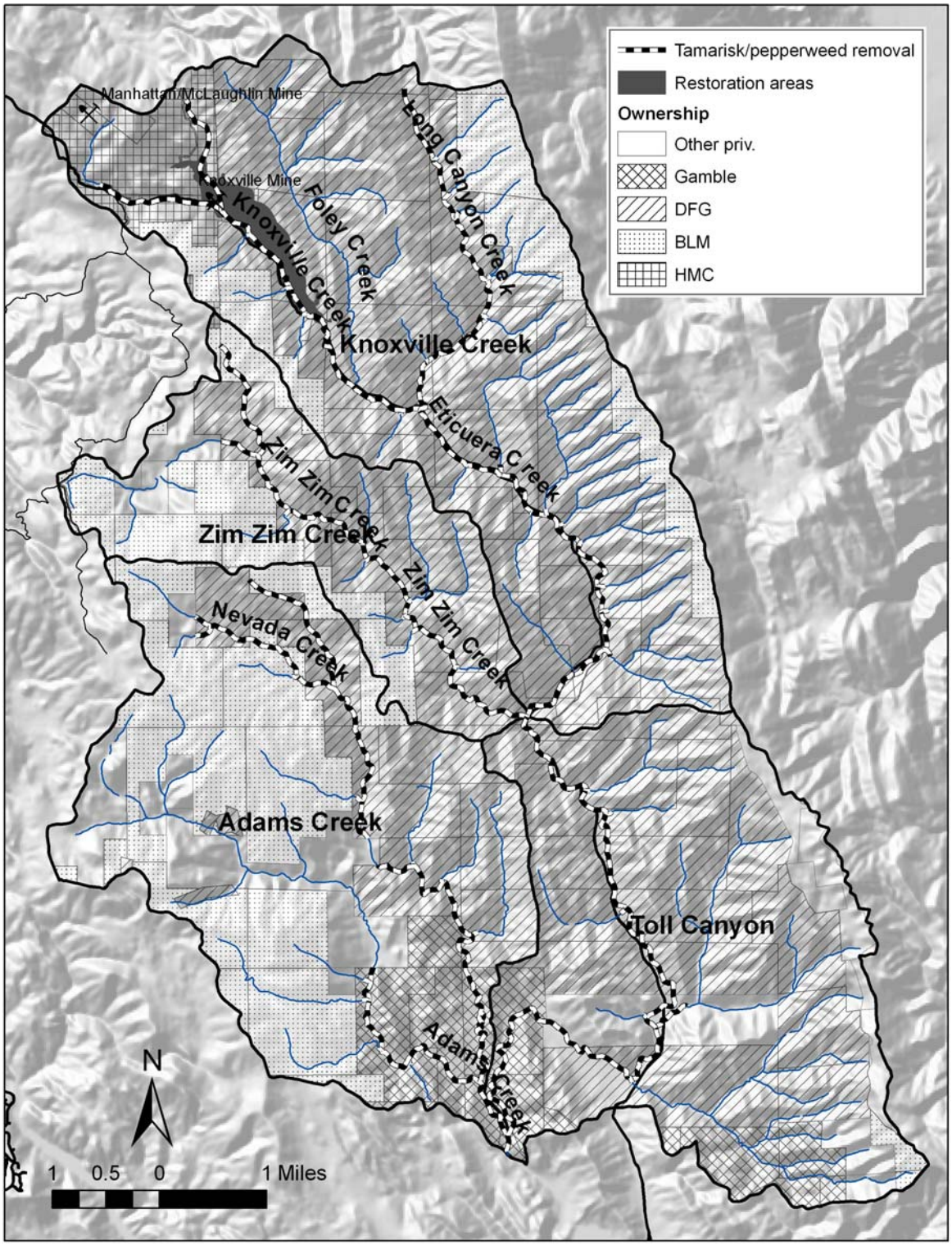


Figure 2. Eticuera Creek watershed showing the general project area including the location of the 300-acre restoration site and streams targeted for pepperweed and tamarisk removal.

# Mitigation Monitoring and Reporting Plan

## Eticuera Creek Watershed Invasive Plant Control and Habitat Restoration Project

| Mitigation Measure | Purpose | Monitoring Requirement | Responsible Party |
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| Biological Resources | | | |
| Sensitive Plants<br><br>1- Prior to work activities in serpentine wetland seep areas, a qualified botanist or trained field technician shall survey the area for sensitive plants. | To avoid or minimize direct adverse impacts to sensitive plants. | University of California- McLaughlin Reserve staff shall monitor weed control crews and conduct necessary sensitive plant surveys prior to work activities to ensure that sensitive plant impact avoidance measures are met. | University of California- McLaughlin Reserve |
| Sensitive Amphibians and Reptiles<br><br>1-Prior to work crews performing duties that require workers to step within the channel and on emersed cobble/gravel bars of any stream, a qualified biologist (or trained field technician) shall search the area for foothill yellow-legged frog and their egg masses and western pond turtle, prior to the worker entering the stream channel. If found in the work area, frogs (including larval forms) and pond turtles shall be relocated immediately upstream of the work area. Frog egg masses found in the work area shall be identified, flagged, and left undisturbed if relocation is deemed not feasible by a qualified biologist.<br><br>2-If work crews perform duties along stream banks during the western pond turtle nesting season (April to August) the work area shall be searched by a qualified biologist (or trained field technician) prior to the commencement of work in the area. If pond turtles are found on the stream banks or associated uplands where work activities are to occur, work in | To avoid adverse direct impacts to sensitive amphibian and reptiles and their habitats from work crew foot traffic within the stream channel and from the crossing of live streams with ATV's. | Surveys as needed prior to and during work activities along and within stream banks.<br><br>Only Department of Fish and Game (DFG) staff and field technicians trained by DFG shall handle foothill yellow-legged frog (and their egg masses if feasible) and western pond turtles and their eggs. | Department of Fish and Game |

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| the area, including the use of vehicles near the stream banks, shall cease immediately and not resume until a qualified biologist (or trained field technician) determines that pond turtles have left the work area.<br><br>3-ATV's and not pick-up trucks shall cross live streams.<br><br>4-Prior to an ATV crossing a live stream, a qualified biologist (or trained field technician) shall search the crossing area for foothill yellow-legged frog and their egg masses, and pond turtle, prior to the crossing. If found, frogs and pond turtles shall be relocated immediately upstream of the crossing area. At the crossing site, frog egg masses shall be identified, flagged and left undisturbed if relocation is deemed not feasible by a qualified biologist. | | | |
| <u>Sensitive Raptors and Passerine Birds</u><br><br>1-Prior to work activities, a qualified biologist (or trained field technician), shall survey the area for nesting golden and bald eagles. If a nesting golden or bald eagle is found, work within 0.5 mile of the nest site shall cease until the nest is determined to be no longer occupied or that work activities do not disrupt breeding behavior of golden and bald eagles.<br><br>2- Prior to work in riparian areas during the long-eared owl nesting season (February to June), a qualified biologist (or trained field technician), shall survey the area for nesting owls. If a nesting owl is found, work in the area shall cease until the nest is determined to be no longer occupied.<br><br>3- Prior to work in the restoration area during the burrowing owl nesting season (January to June), a qualified biologist (or trained field technician), shall survey the area for nesting burrowing owls. If a nesting owl is found, work in the area shall cease until the nesting burrow is determined to be no longer occupied.<br><br>4- Prior to removal of tamarisk, individual tamarisk | To avoid and minimize disturbance to nesting birds and their offspring and passerine bird breeding habitat. | Surveys as needed during the appropriate bird nesting seasons.<br><br>Only Department of Fish and Game (DFG) staff and field technicians trained by DFG shall conduct surveys for birds. | Department of Fish and Game |

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| trees shall be searched for bird nests by a qualified biologist or trained field technician. If a nest is found, it shall be flagged in the field and be given a 100-foot buffer where no tamarisk shall be removed until after the young have fledged as determined by a qualified biologist or trained field technician. | | | |
| <u>Riparian Resources</u> | | | |
| 1- If livestock grazing is used as a tool for site preparation in the 300-acre upland restoration site, all livestock shall be excluded from any riparian areas using fencing, including electric fencing if needed. Fencing shall be checked periodically and any portions found damaged or in disrepair shall be immediately repaired. | To avoid direct and indirect adverse impacts to riparian and aquatic biological resources, and avoid and minimize watercourse bank erosion and sediment delivery to the watercourse. | Audubon California and University of California- McLaughlin Reserve shall ensure that livestock are excluded from riparian areas in and near the 300-acre restoration site by constructing and maintaining riparian exclusion fencing. | Audubon California and University of California-McLaughlin Reserve |
| Cultural Resources | | | |
| 1-Prior to ground-disturbing activities (e.g. harrowing, grazing) in the 300-acre restoration area, a records search of the Northwestern Information Center shall be conducted and the site shall be surveyed by a qualified archeologist.<br><br>2-If human remains are encountered within the restoration area, work shall halt in the vicinity and the County Coroner and Native American Heritage Commission shall be contacted within 24 hours of the discovery. | To avoid adversely affecting sensitive Native American Indian artifacts and archeological artifacts of historical significance in the 300-acre restoration area. | Historic information searches and ground surveys of the 300-acre restoration area shall be conducted by a qualified archeologist. | University of California-McLaughlin Reserve and Blue Ridge Berryessa Natural Area Conservation Partnership. |

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| Hazards and Hazardous Materials | | | |
| 1-Work activities involving the use of herbicides shall be conducted under the supervision of a licensed pesticide applicator.<br><br>2-All personnel transporting or applying herbicide shall be instructed by a licensed pesticide applicator on proper procedures for handling and applying herbicides.<br><br>3-Herbicides shall be mixed and transported in batches of 100 gallons or less to minimize impacts of accidental spills.<br><br>4-All transport vehicles shall be equipped with spill kits. | To ensure proper application of and minimize environmental contamination by herbicides. | Workers applying and transporting herbicides shall be conducted or supervised by a licensed herbicide applicator.<br><br>Accidental contamination by herbicides shall be minimized. | University of California-McLaughlin Reserve and Audubon California |
| Hydrology and Water Quality | | | |
| 1-All herbicides used in the vicinity of standing water shall be registered for use in aquatic environments.<br><br>2- All ATVs that cross streams shall be inspected daily for leaks and discharge of engine oil lubricants. All fueling and maintenance activities shall occur away from creek channels. | To ensure proper application of and minimize environmental contamination by herbicides. | Workers applying and transporting herbicides shall be conducted or supervised by a licensed herbicide applicator | University of California-McLaughlin Reserve and Audubon Canyon Ranch |